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ABSTRACT

The paper describes problems endemic to the evaluation of programs for gifted and talented students. The goals of gifted and talented programs are often substantially different from those covered on outcome measures available to schools. When decisions are being made about the type of programs to be provided, parallel consideration should be given to how the program is to be evaluated. Two dimensions on which gifted and talented programs generally vary are acceleration vs. enrichment and in-class provision of instruction vs. pull-out programs. Examples are then given of programs which follow each of these four models: in-class enrichment, in-class acceleration, pull-out enrichment, and pull-out acceleration. Characteristics of good evaluation consider 30 standards organized into the following four categories of quality: utility, feasibility, propriety, and accuracy. A sampling of these standards as they apply to gifted and talented programs is discussed. These standards include: audience identification, information scope and selection, valuational interpretation, practical procedures, rights of human subjects, object identification, valid and reliable measurement. It is concluded that the evaluation of gifted programs requires more care in the identification of audience, the lack of common goals for all students, and lack of appropriate instruments. (DB)

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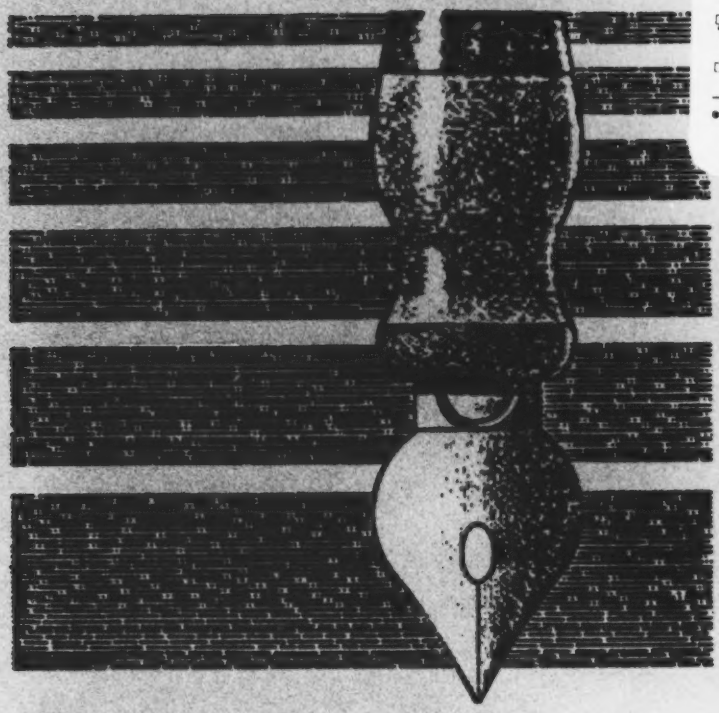

Occasional Paper Series

Evaluation Issues Generated by Two Dimensions of Gifted and Talented Programs

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AEL Occasional Paper 022

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December 1985

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BIOGRAPHICAL NOTES

Dr. Bunda is Associate Director of the Evaluation Center at Western Michigan University. She has worked with a number of school systems in the development of evaluation designs for special programs and the development of assessment devices for the curriculum. Her recent publications have been in the area of evaluation design and ethics of evaluation.

ABSTRACT

This paper describes problems endemic to the evaluation of gifted and talented programs. It begins with a discussion of two dimensions on which gifted and talented programs generally vary: acceleration vs. enrichment and in-class provision of instruction vs. pull-out programs. Examples of programs with these characteristics are given. Finally, a discussion of specific evaluation problems is presented using the Joint Committee Standards for Evaluation as the organizer for quality evaluation.

INTRODUCTION

Development of a program for gifted and talented by any school district requires district personnel to make a tremendous number of decisions. First among them usually is: Who are the gifted? The issue of identification is followed immediately by that of program development. How might the school best foster the students' talents? Often the complex issues of identification and development are so rigorously dealt with that evaluation is not considered until the program is in place, if it is considered at all.

Evaluation of gifted and talented programs presents a unique set of inherent problems. Not the least of these problems is that districts do not regularly collect data useful in evaluating the quantity of gifted and talented programs. On the other hand, the quality of regular education programs can be assessed through such measures as achievement testing. All districts have some form of regular achievement testing program that provides information about core subject matter. Most states have some sort of statewide testing program that provides regular information about basic skills achievement to school professionals. Personnel evaluation systems often consider the extent to which teachers use the district's curriculum. Thus, a district can make some judgments about the quality of its regular instructional program with data already in hand, so that even if a school is not evaluating a program regularly it can pull together data that responds to questions about quality.

However, achievement or other comparable outcome data appropriate for assessing the quality of special programs generally do not exist. The goals of gifted and talented programs are often substantially different from those covered on outcome measures available to schools. Consequently, while decisions are being made about the type of program to be provided by the district, parallel consideration should be given to how the program is to be evaluated. The general character of the gifted program should be reflected in the evaluation of that program. While each program is likely to have unique goals and procedures, some common characteristics of gifted and talented programs lead to substantially different evaluation problems.

This paper is centrally concerned with problems in the evaluation of gifted and talented programs; a brief discussion of two dimensions of such programs will set the stage for examining those problems.

GIFTED AND TALENTED PROGRAMS

Programs for the gifted are as varied and multifaceted as all of education itself. They can be developed for any grade level in any one of the subject areas. Some school districts have targeted programs in a few grades and subject matters while others have an effort parallel to the regular curriculum. As is common in developing curriculum for the regular program, curriculum developers in the gifted and talented area must identify a need for the program, develop its goals and objectives, and design strategies and materials to accomplish them. Whatever the content of instruction, gifted programs tend to vary along two dimensions usually not considered in curriculum for the regular program. These two dimensions, curriculum and delivery system, will serve as the organizer for some examples of programs.

Consideration must be given to the relationship of the program for gifted and talented to the regular curriculum. The gifted and talented program does not exist in a vacuum; the goals of the regular program serve as the base from which new goals are developed. However, developing new goals can take different directions. Essentially, the literature takes two positions. One is that the gifted program should be qualitatively different from the regular curriculum--that is, the regular curriculum goal should serve as the base from which the gifted program grows, a form of development called enrichment. Renzulli (1977) has proposed a triad model of enrichment postulating three different types of enrichment to be built into a program: (1) general exploratory activities, (2) group training activities, and (3) individual projects. Renzulli and others who support the concept of

enrichment argue that it is more than allowing students to work at their own rate on the same material presented to the regular class. Rather, enrichment requires that qualitatively different activities be provided for the gifted and talented students.

Benbow and Stanley (1983) support a second position--the acceleration of students through the program at a pace consistent with their individual learning abilities. Students may be presented with algebra and geometry in elementary school and move through college level coursework in high school.

In short, acceleration programs move students through the curriculum at a faster pace vertically; enrichment programs build a richer base of information for students at each grade level horizontally.

A second dimension of variation is the manner of delivery. One form of delivery is in the regular classroom, where programs have materials available for an individual child or group of children. Such programs are considered a part of the regular school day. Another form is the pull-out program, in which children are removed from their regular classroom and instructed as a special group. Both methods have ramifications for what the students learn, but this dimension tends to have greater impact on the kind of staff needed to implement programs for the gifted and talented. In-class activities call for in-service education of all teachers and, perhaps, the use of teacher consultants to develop special materials. Pull-out programs generally require a teacher with special training in teaching gifted and talented students.

Research on which of these organizations is more effective is, at best, inconclusive. There is active dialogue between the enrichment and acceleration supporters. Districts must also consider what they can

reasonably mount as they begin planning their programs. Most districts start by appointing an advisory board to consider what kind of program to implement. The district staff and the board should discuss together:

- the need for the program,
- program philosophy and objectives,
- types of gifted to be included,
- screening and identification criteria,
- professional staff needed,
- physical facilities and transportation, and
- in-service training (Tuttle, 1978).

As the numbers and types of gifted students in the district become known, planners should consider whether to use enrichment or acceleration, in-class or pull-out. Each of these dimensions is an independent decision. A two-by-two matrix as shown in Figure 1 illustrates the dimensions.

	Enrichment	Acceleration
In-Class		
Pull-Out		

Figure 1
Types of Gifted Programs

Each program type would have essentially different characteristics and would present essentially different evaluation problems. To illustrate the characteristics of the programs, a description of each type will be given. Each of the programs described below will be totally articulared with the

regular education curriculum; that is, the goals of the regular curriculum will serve as the beginning point for goals of the gifted program, as opposed to programs developed with a unique set of goals. An example of a stand-alone program might be a junior great books discussion (Clendening and Davies, 1980).

In-Class Enrichment

Clendening and Davies (1980) describe a gifted and talented reading program that is a support program for the school district's major basic reading series. Students who have been identified as gifted remain in their regular classes and have their reading instruction supplemented from related materials in the district's reading series for all students. Individual classroom teachers collect materials that gifted students can use after they have completed the material their peers are also reading.

Some suggestions for gathering the materials are:

1. Provide complete works for those literary selections in the reading series that have been abridged or condensed. Grade level reading series often contain excerpts from a number of novels and short stories. Students may want to read the entire work after they have read a condensation; to do so would broaden their understanding of the materials presented.

2. Provide biographical information about authors included in the reading series. Some of the authors may have written autobiographies. Others may be referenced in such material as Newberry Author filmstrips.

3. Provide sequels to the basic reader selections, if such exist. If the title is part of a series, acquaint students with other titles in the series.

4. Provide other works by authors of selections in the basic reader.

5. Provide print and nonprint resources to reinforce and extend understanding of information articles in the basic reader. If a selection concerns efforts to protect an endangered species, for example, materials may be available on protecting other species.

The individual teacher in an in-class enrichment program is responsible for providing gifted students with materials to enhance and enrich their reading ability. Students remain in the classroom with their peers and cover the same topics their peers do.

In-Class Acceleration

Providing the student opportunity to skip a grade is a traditional method of accelerating gifted students at the elementary level. Strictly speaking, the "program" in this case is no different than the regular educational program, but the district is making provision for the student to progress faster. Identifying students for skipping essentially takes the form of assessment of student learning by such objective measures as norm referenced tests and evaluation by the sending and the receiving teacher.

Enrolling students in accelerated courses or college-level content courses is a traditional method of acceleration at the high school level. Mercurio, Lambert, and Oesterle (1983) found that students who took college-level courses in high school did well in their college work. These authors do caution, however, that "courses [be] taught by carefully selected high school faculty members whose credentials have been reviewed and approved by faculty committees from appropriate college departments" (p. 75).

Pull-Out Enrichment

A key ingredient in many gifted and talented programs is the use of independent study for students to develop areas of their interest. While

this can lead to problems (see Renzulli, 1977), essentially it represents a goal common to gifted programs: providing students with skills that will enable them to be independent learners. Clendening and Davies (1983) describe a mini-course that could be provided to junior high school students outside their regular classroom experiences. Designed by The World Book Encyclopedia, the course contains filmstrips, cassettes, and workbooks. Students are introduced to reference materials and learn how to use libraries. The material is part of the regular education curriculum, but a separate course designed for the gifted allows them to become acquainted with a wide variety of resources that may not be discussed with regular classroom students.

Pull-Out Acceleration

Stanley and Benbow (1982) describe a pull-out program at Johns Hopkins University for mathematically gifted students in the Baltimore area. Students are identified in the sixth grade with a college entrance examination. Those with high enough scores take high school and college level mathematics courses on Saturday mornings instead of the regular school mathematics courses. Many different colleges are providing this service for talented youngsters; it may also be provided by the home school district.

Summary

As can be seen from the four examples given and from the preceding discussion, programs for the gifted and talented differ on at least two important dimensions:

- The extent to which they provide a qualitatively different learning experience (enrichment) or a faster learning experience (acceleration).

- The delivery system used to provide the learning experience--i.e., in the regular classroom or in a small group outside the regular class facilities.

There are no doubt other important issues on which one could look at gifted programs, such as staffing patterns or congruence with regular education curriculum. However, the delivery system and type of learning will provide a basis for the discussion of evaluation.

EVALUATION STRATEGIES

Good evaluation is that which provides important information about the quality of an educational program. At issue in most evaluation is how to get "good" information. Some would say that evaluation is the extent to which students achieve the goals of a program. Those people would conduct evaluation by measuring only what students have learned and comparing that information with the program's stated goals. As we have seen, however, gifted programs of the enrichment type are likely to have goals of providing students with learning alternatives. One could not measure all students in such a program on goal achievement. Others consider using only outcome measures, a restricted definition of evaluation. They believe attention should be given to a program's operation. Does it follow an approved plan? Is it designed in the best possible way? These questions require other methods of investigation than simple student testing. Accrediting agencies that do professional program reviews look for the provision of facilities and qualified staff as they conduct evaluations.

The methods or strategies of evaluation are as varied as the methods of inquiry in education. Techniques for gathering data include the use of achievement tests, attitude inventories, observation, and rating scales. All of these methods can provide good information in some cases. No one data collection method is better than another. The focus of the evaluation should be determined by the individuals who need the information to make decisions. The first question in designing evaluation is not whether a test is available. Rather, the focusing questions should be: "What needs to be known about this program?" and "Who needs to know it?"

A number of different people have concerns about a program's quality. Clearly, school professionals want to know about quality. But parents of children in the program and community members also have concerns. Identifying all the audiences or stakeholders in an evaluation situation is essential. It is unlikely that all stakeholders will have the same concerns or will define program quality in exactly the same way; therefore the evaluation must address the variety of questions. Evaluation quality is judged by the extent to which stakeholders get accurate and useful information from a practical and ethical design.

The Joint Committee on Standards for Educational Evaluation (1981) lists the characteristics of good evaluation. The standards are organized into four categories of quality: utility, feasibility, propriety, and accuracy. Each category is further developed into characteristics that enhance the quality of the evaluation. A number of those standards will be used to discuss the problem of identifying good information in gifted programs. Although the most effective evaluator would attempt to meet each of the 30 standards, only a sample of the set--as to how they specifically relate to evaluating gifted programs--will be discussed below.

Utility Standards

Utility has to do with the ability of the evaluator to identify the information needs of individuals and to present the information in a clear and usable manner. Clarity of presentation is not necessarily associated with the type of program being evaluated but rather with the skill of the evaluator. However, identifying audiences for the evaluation and the information they need can be a difficult and unique task in evaluating programs for the gifted.

Audience Identification (Standard A1)

An evaluator of gifted programs, whether enrichment or acceleration, must consider all of the various parties who might be interested in quality of the program. Not only professional educators but also parents will be interested in the quality of the educational experience. In the case of gifted education, parents are not likely to speak in one voice. On the one hand are parents of students in the program, concerned that their children receive the best possible educational experience. On the other hand are parents of children not in the program, wondering whether the budget allocated for the gifted program might be better spent on their own children. Considering all the stakeholders in the program is essential to a comprehensive evaluation.

Information Scope and Selection (Standard A3)

This standard reminds the evaluator that much more should be considered than the simple achievement of objectives. The information collected concerning a program must be a balance between what anyone would like to know about the program and what could reasonably be expected to be collected. In the case of gifted programs, a clear mandate should be seen for collection of student satisfaction data. The purpose of the program design generally has at its base the desire to make the school experience more satisfying to individual students because it matches their potential. Consequently, whatever strategy the program uses, it should be more fulfilling to the student. Acceleration programs should as normal procedure check the social adjustment of the student participants, since one of the main criticisms of acceleration in the cognitive area is the mismatch of social and cognitive

growth. Pull-out programs must collect information concerning the extent to which the program may disrupt the rest of the students' school day.

Valuational Interpretation (Standard A4)

This standard reminds the evaluator that the values associated with each of the program criteria must be made clear. An evaluator who uses acceleration as a standard for a program with a philosophy of enrichment is doing a disservice to the program. Both the evaluator and the program developers should consider what positive outcomes are planned as part of the program and what the likely side effects of the program are. Additionally, the evaluator should take care to find out whether parents and students share the value positions taken by the program.

Feasibility Standards

Feasibility standards are meant to insure that an evaluation is designed and conducted in a manner to produce information worth its cost.

Practical Procedures (Standard B1)

This standard requires that the evaluation be conducted with a minimum of disruption to the participants in the program. Some agencies that provide funding for gifted programs require evaluations of funded programs to produce information from contrast groups. That is, they require that the design of the program show some sort of causal relationship between the program and the learning that took place. This is especially difficult for enrichment gifted programs. Often there are no comparable programs to use as comparisons. While accelerated programs have comparable content programs offered, often the students participating in the programs are

different. Consequently, it is often difficult to design an evaluation that uses comparison as the basis for determining the quality of the program without demanding a great deal of extra time and effort from the participants. This is particularly true in school districts not located in large urban areas. It may be possible to find students with similar characteristics who are experiencing different programs or to find programs that are similar but serve a different student population. It would be rare to find both outside a large urban area. Even if one were able to find appropriate contrast groups, securing their participation in an evaluation might be difficult.

Propriety Standards

Rights of Human Subjects (Standard C5)

Generally speaking, this standard requires that an evaluator be sensitive to the right of the individual to confidentiality and respect. In the case of gifted program evaluation, the concern of the evaluator must be with balancing the need for information about the student's home environment with what may be invasion of privacy. As educators, we are concerned with eliminating alternative explanations for student learning. Most evaluation designs try to find out as much as they can about out-of-school activities of students so that they can show that only the in-school activities are associated with learning; in the case of enrichment programs, a number of questions that may verge on invasion of privacy might be asked of parents. Special care must be taken to insure that the data are kept absolutely confidential.

Accuracy Standards

Accuracy standards characterize conditions that must be met for the evaluation to produce trustworthy information.

Object Identification (Standard D1)

This standard is particularly difficult to meet when doing an evaluation of in-class enrichment programs. The standard demands that the evaluator have a clear understanding of the program being evaluated. In many instances an in-class enrichment program relies heavily on the opportunity for students to use a number of different materials. The evaluator cannot and should not suppose that all materials have been used by all students. Rather, a proportion of the evaluation budget must be allocated to documenting the program. When clients of the evaluation believe that evaluation is strictly the administration of tests, defense of observational data may be a problem. Without specific attention to description of the object, however, many in-class enrichment programs cannot be evaluated.

Valid and Reliable Measurement (Standards D5 and D6)

Before proceeding with a discussion of measuring the outcomes of the gifted program itself, it should be mentioned that the practice of measuring students on the regular education assessment devices to show that they have not fallen behind may not produce good information. First, one should consider whether those tests are valid for students who are part of the gifted program. If the gifted program has not been articulared with the regular program, the students may not have been presented with the material. If the test is valid, and the students in the program have consistently

scored at the top of the test, then the concern may be for the reliability of the measurement. It is possible that the students in the gifted program could, by chance, have lower scores simply because of a lack of reliability and not because they had lost some learning.

The issue of measuring achievement outcomes in gifted programs is by far the most difficult to address. In the case of enrichment programs the exact specification of the outcomes is not determined. In these cases it would be difficult to develop the necessary instrumentation. In the case of the in-class enrichment program described above, for example, suppose that some of the students in the class had read sequels to the material presented in the reading series while others had read biographies of the authors. No one instrument could then be designed to measure common learning. In the case of enrichment programs, outcome measures should probably take the form of student products that are then rated for quality. On the other hand, most acceleration classes have specific learning outcomes with devices developed for older students. In the acceleration program described, students in the elementary level are learning high school mathematics while students in the high school level are learning college-level mathematics. While instruments to measure those achievements are available, they have been developed for use with students at different grade levels. The interpretive scores produced from those instruments--i.e., the norms--are not comparable to those of students in the gifted program. In this situation, the content of the examination may be comparable but the norms are not; consequently, interpretation of the instruments must be called into question. Additionally, while the tests are content- or curricular-valid, they may not have the same reliability in

their use with the gifted program that they have with the norm group. The norm group has a great deal of heterogenous achievement: gifted students tend to score at the top of the test. The lack of variance makes it difficult to assess the reliability of the instruments.

CONCLUSION

The evaluation of gifted programs generally requires more care in the identification of audience concerns than do other programs. The definition of a quality program is likely to be different among the various stakeholders. Additionally, the measurement of the outcomes of the program is plagued by two difficult problems. First, some programs may not have common goals for all students. This condition precludes the use of a single measure. Second, the students in the program are often so homogeneous that determining the technical quality of the instruments used is difficult.

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